

WHAT IS CLAIMED IS:

1. An apparatus which detects a position of a target mark included in an object, comprising:

a unit which senses an image of the object;

5 a unit which extracts a first mark and feature of a region outside of the first mark in the image; and

a unit which selects a second mark different from the target mark as a new target mark based on the position of the first mark and the feature.

10 2. An apparatus according to claim 1, wherein the feature corresponds to an auxiliary mark, which is included in the object and associated with the first mark.

3. An apparatus according to claim 2, wherein a
15 plurality of the first marks have different auxiliary marks, respectively.

4. An apparatus according to claim 2, wherein the auxiliary mark is connected to the first mark.

5. An apparatus according to claim 2, wherein the
20 auxiliary mark is surrounded by the first mark.

6. An apparatus according to claim 1, wherein the feature corresponds to a positions of the first mark relative to another mark extracted by said extraction unit.

25 7. An apparatus according to claim 1, wherein the feature corresponds to a position of the first mark relative to a plurality of marks extracted by said

extraction unit.

8. An apparatus according to claim 1, wherein said selection unit selects the second mark as the new target mark from a plurality of marks extracted by said
5 extraction unit.

9. An apparatus according to claim 8, wherein said selection unit selects the second mark as the new target mark based on a signal of the second mark.

10. An apparatus according to claim 1, wherein the
10 object is a substrate on which a device is to be formed.

11. An apparatus according to claim 10, further comprising a stage unit which positions the substrate.

12. An apparatus according to claim 11, further comprising a unit which controls positioning of the
15 substrate by said stage unit based on the position of the target mark.

13. An apparatus according to claim 1, wherein the object is a first substrate on which a device is to be formed, and a mark corresponding to the second mark is
20 initially selected as the target mark with respect to a subsequent substrate in a lot including the first substrate.

14. An apparatus which exposes a substrate to radiant energy, comprising:

25 a stage unit which positions the substrate;
a unit which senses an image of the substrate;
a unit which extracts a first mark and feature of

a region outside of the first mark in the image;

a unit which selects a second mark different from the target mark as a new target mark based on the position of the first mark and the
5 feature; and

a unit which controls said stage unit so as to position the substrate based on the position of the target mark.

15. A method of detecting a position of a target mark
10 included in an object, comprising steps of:

sensing an image of the object;

extracting a first mark and feature of a region outside of the first mark in the image; and

selecting a second mark different from the
15 target mark as a new target mark based on the position of the first mark and the feature.

16. A method of manufacturing a device, comprising steps of:

sensing an image of a substrate;

20 extracting a first mark and feature of a region outside of the first mark in the image; and

selecting a second mark different from the target mark as a new target mark based on the position of the first mark and the feature; and

25 transferring a pattern concerning the device to the substrate based on the position of the target mark.